SELECTIONS FROM THE US GUIDELINES AND THE GLOBAL REPORT ON ASTHMA

Up-to-date figures and tables on asthma severity, control, and management

National Asthma Education and Prevention Program Expert Panel Report 3

2007

2020 FOCUSED UPDATES TO THE Asthma Management Guidelines

GLOBAL INITIATIVE FOR ASTHMA®

Updated 2026

INTENDED USE OF SELECTIONS FROM THE US GUIDELINES AND THE GLOBAL REPORT ON ASTHMA

The following tables and figures are taken directly from the US Guidelines, including the National Asthma Education and Prevention Program's (NAEPP) Expert Panel Report EPR-3 (2007) and 2020 Focused Updates to the Asthma Management Guidelines, and the Global Initiative for Asthma (GINA) 2026 Report without alteration of content or wording, unless otherwise specified. In this compilation, you will find key tables on asthma severity, control, and treatment management based on the most current recommendations.

- Each image is referenced to its source
- This is not a comprehensive compilation of all US guidelines or GINA reports
- The intent of this document is to provide a quick "point-of-care" summary tool
- A complete appraisal of the provided information can be obtained by examining the full context of the source documents
- Unless otherwise specified, this document applies to patients ≥12 years of age

Note: These guidelines and reports may contain scientific information about products or uses that are not approved by the US Food and Drug Administration for use in the United States. Providing this information does not constitute any recommendation for use nor does it imply the efficacy or safety of any unapproved product or product use.

1. National Heart, Lung, and Blood Institute. National Asthma Education Prevention Program. *Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma*. 2007:343-345.

2. National Heart, Lung, and Blood Institute. National Asthma Education Prevention Program Coordinating Committee Expert Panel Working Group. *2020 Focused Updates to the Asthma Management Guidelines*. 2020:1-29.

3. Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention, 2026. Available from: www.ginasthma.org

The National Asthma Education and Prevention Program (NAEPP) published an Expert Panel Report, EPR-3, in 2007. In 2014, the Asthma Expert Working Group of the National Heart, Lung, and Blood Advisory Council (NHLBAC) completed an assessment of the need to revise the NAEPP's EPR-3 and determined that a focused update on six priority topics was warranted. In December 2020, the *2020 Focused Updates to the Asthma Management Guidelines* were published.

The full 2020 Report is not a complete revision of the 2007 EPR-3. To better understand the new 2020 Stepwise Approach for Management of Asthma, classification of asthma severity from EPR-3 2007 is provided first, followed by the preferred and alternate treatment steps recommended by the *2020 Focused Updates to the Asthma Management Guidelines*.

The impairment and risk-based asthma control categories also remain unchanged from the EPR-3 2007 report; therefore, for assessment of asthma control once therapy is initiated, the EPR-3 2007 classification of asthma control is also provided.

1

National Heart, Lung, and Blood Institute. National Asthma Education Prevention Program. *Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma*. 2007:343-345.

Adapted from NAEPP EPR-3

FULL REPORT 2007

COMPONENTS OF SEVERITY		CLASSIFICATION OF ASTHMA SEVERITY (≥12 years of age)			
		Intermittent	Persistent		
			Mild	Moderate	Severe
Impairment **Normal FEV_1/FVC:** **8-19 yr 85%** **20-39 yr 80%** **40-59 yr 75%** **60-80 yr 70%**	Symptoms	≤2 days/week	>2 days/week but not daily	Daily	Throughout the day
	Nighttime awakenings	≤2x/month	3-4x/month	>1x/week but not nightly	Often 7x/week
	Short-acting $beta_2$-agonist use for symptom control (not prevention of EIB)	≤2 days/week	>2 days/week but not daily, and not more than 1x on any day	Daily	Several times per day
	Interference with normal activity	None	Minor limitation	Some limitation	Extremely limited
	Lung function	· Normal FEV_1 between exacerbations · FEV_1 >80% predicted · FEV_1/FVC normal	· FEV_1 >80% predicted · FEV_1/FVC normal	· FEV_1 >60% but <80% predicted · FEV_1/FVC reduced 5%	· FEV_1 <60% predicted · FEV_1/FVC reduced >5%
Risk	Exacerbations requiring oral systemic corticosteroids	0-1/year (see note)	≥2/year (see note) →		
		← Consider severity and interval since last exacerbation. → Frequency and severity may fluctuate over time for patients in any severity category. Relative annual risk of exacerbations may be related to FEV_1.			
Recommended Step for Initiating Treatment **(See "Ages 12+ Years: Stepwise Approach for Managing Asthma" for treatment steps.)**		Step 1	Step 2	Step 3 and consider short course of oral systemic corticosteroids	Step 4 or 5
		In 2-6 weeks, evaluate level of asthma control that is achieved and adjust therapy accordingly.			

Key: EIB, exercise-induced bronchospasm; FEV_1, forced expiratory volume in 1 second; FVC, forced vital capacity; ICU, intensive care unit.

- The stepwise approach is meant to assist, not replace, the clinical decision-making required to meet individual patient needs.
- Level of severity is determined by assessment of both impairment and risk. Assess impairment domain by patient's/caregiver's recall of previous 2–4 weeks and spirometry. Assign severity to the most severe category in which any feature occurs.
- At present, there are inadequate data to correspond frequencies of exacerbations with different levels of asthma severity. In general, more frequent and intense exacerbations (eg, requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate greater underlying disease severity. For treatment purposes, patients who had ≥2 exacerbations requiring oral systemic corticosteroids in the past year may be considered the same as patients who have persistent asthma, even in the absence of impairment levels consistent with persistent asthma.

2

National Heart, Lung, and Blood Institute. National Asthma Education Prevention Program Coordinating Committee Expert Panel Working Group. *2020 Focused Updates to the Asthma Management Guidelines*. 2020:1-29.

The Expert Panel that produced the 2020 asthma guidelines update was asked to address specific questions about six priority topics rather than revise all of EPR-3.

THOSE 6 TOPICS INCLUDED:

1. Intermittent Inhaled Corticosteroids
2. Long-Acting Muscarinic Antagonists
3. Indoor Allergen Mitigation
4. Immunotherapy in the Treatment of Allergic Asthma
5. Fractional Exhaled Nitric Oxide Testing
6. Bronchial Thermoplasty

AGES 12+ YEARS: STEPWISE APPROACH FOR MANAGEMENT OF ASTHMA

	Intermittent Asthma	Management of Persistent Asthma in Individuals Ages 12+ Years				
Treatment	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6 ■
Preferred	PRN SABA	Daily low-dose ICS and PRN SABA or PRN concomitant ICS and SABA▲	Daily and PRN combination low-dose ICS-formoterol▲	Daily and PRN combination medium-dose ICS-formoterol▲	Daily medium-high dose ICS-LABA + LAMA and PRN SABA▲	Daily high-dose ICS-LABA + oral systemic corticosteroids + PRN SABA
Alternative		Daily LTRA* and PRN SABA or Cromolyn,* or Nedocromil,* or Zileuton,* or Theophylline,* and PRN SABA	Daily medium-dose ICS and PRN SABA or Daily low-dose ICS-LABA, or daily low-dose ICS + LAMA,▲ or daily low-dose ICS + LTRA,* and PRN SABA or Daily low-dose ICS + Theophylline* or Zileuton,* and PRN SABA	Daily medium-dose ICS-LABA or daily medium-dose ICS + LAMA, and PRN SABA▲ or Daily medium-dose ICS + LTRA,* or daily medium-dose ICS + Theophylline,* or daily medium-dose ICS + Zileuton,* and PRN SABA	Daily medium-high dose ICS-LABA or daily high-dose ICS + LTRA,* and PRN SABA	
		Steps 2–4: Conditionally recommend the use of subcutaneous immunotherapy as an adjunct treatment to standard pharmacotherapy in individuals ≥ 5 years of age whose asthma is controlled at the initiation, build up, and maintenance phases of immunotherapy▲			Consider adding Asthma Biologics (e.g., anti-IgE, anti-IL5, anti-IL5R, anti-IL4/IL13)**	

Assess Control

- First check adherence, inhaler technique, environmental factors,▲ and comorbid conditions.
- **Step up** if needed; reassess in 2–6 weeks
- **Step down** if possible (if asthma is well controlled for at least 3 consecutive months)

Consult with asthma specialist if Step 4 or higher is required. Consider consultation at Step 3.

Control assessment is a key element of asthma care. This involves both impairment and risk. Use of objective measures, self-reported control, and health care utilization are complementary and should be employed on an ongoing basis, depending on the individual's clinical situation.

Abbreviations: AHRQ, Agency for Healthcare Research and Quality; FDA, Food and Drug Administration; ICS, inhaled corticosteroid; Ig, immunoglobulin; IL, interleukin; LABA, long-acting beta$_2$-agonist; LAMA, long-acting muscarinic antagonist; LTRA, leukotriene receptor antagonist; PRN, as-needed; SABA, inhaled short-acting beta$_2$-agonist.

▲ Updated based on the 2020 guidelines.

* Cromolyn, Nedocromil, LTRAs including Zileuton and montelukast, and Theophylline were not considered for this update, and/or have limited availability for use in the United States, and/or have an increased risk of adverse consequences and need for monitoring that make their use less desirable. The FDA issued a Boxed Warning for montelukast in March 2020.

** The AHRQ systematic reviews that informed this report did not include studies that examined the role of asthma biologics (e.g. anti-IgE, anti-IL5, anti-IL5R, anti-IL4/IL13). Thus, this report does not contain specific recommendations for the use of biologics in asthma in Steps 5 and 6.

■ Data on the use of LAMA therapy in individuals with severe persistent asthma (Step 6) were not included in the AHRQ systematic review and thus no recommendation is made.

In the stepwise approach to therapy for asthma, the clinician escalates treatment as needed (by moving to a higher step) or, if possible, de-escalates treatment (by moving to a lower step) once the individual's asthma is well-controlled for at least 3 consecutive months. When preparing the stepwise diagram, the Expert Panel used some of the definitions and assumptions from EPR-3.

According to the NAEPP 2020 Updates, maintenance and reliever therapy is recommended in 1 inhaler consisting of low-dose ICS and formoterol (step 3) or medium-dose ICS and formoterol (step 4) given as 1 to 2 puffs once or twice daily as maintenance and 1 to 2 puffs as needed for symptoms. (Do not exceed 12 total puffs per day in patients age ≥12 years.) [Recommendations supporting the use of maintenance and reliever therapy in 1 inhaler consisting of ICS/formoterol are primarily based on clinical data with an ICS/formoterol dry powder inhaler product that is not approved or available in the United States.]

The use of ICS-formoterol is not approved for maintenance plus rescue therapy in the United States. The recommendations for ICS-formoterol are primarily based on clinical data evaluating the use of an ICS-formoterol formulation that is not approved and not available in the United States.

The NAEPP 2020 Focused Updates did not include new research or the US FDA approval of multiple drugs classified as asthma biologics occurring after October 2018.

Key: EPR, Expert Panel Report; NAEPP, National Asthma Education and Prevention Program.

2 National Heart, Lung, and Blood Institute. National Asthma Education Prevention Program Coordinating Committee Expert Panel Working Group. *2020 Focused Updates to the Asthma Management Guidelines*. 2020:1-29.

Important aspects of care, such as asthma education (including inhaler technique) and assessment tools for asthma control, adherence, and other factors, are not covered in the 2020 Focused Update. Reasons cited for these limitations included lack of time, lack of resources, and, for some topics, insufficient new evidence.

1 National Heart, Lung, and Blood Institute. National Asthma Education Prevention Program. *Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma*. 2007:343-345.

Adapted from NAEPP EPR-3

The EPR-3 2007 classification of asthma control in youths ≥12 years of age and adults is shown here:

COMPONENTS OF CONTROL		CLASSIFICATION OF ASTHMA CONTROL (≥12 years of age)		
		Well-Controlled	Not Well-Controlled	Very Poorly Controlled
Impairment	Symptoms	≤2 days/week	>2 days/week	Throughout the day
	Nighttime awakenings	≤2x/month	1-3x/week	≥4x/week
	Interference with normal activity	None	Some limitation	Extremely limited
	Short-acting $beta_2$-agonist use for symptom control (not prevention of EIB)	≤2 days/week	>2 days/week	Several times per day
	FEV_1 or peak flow	>80% predicted/personal best	60-80% predicted/personal best	<60% predicted/personal best
	Validated questionnaires ATAQ ACQ ACT	 0 ≤0.75* ≥20	 1-2 ≥1.5 16-19	 3-4 N/A ≤15
Risk	Exacerbations requiring oral systemic corticosteroids	0-1/year	≥2/year (see note)	
		Consider severity and interval since last exacerbation		
	Progressive loss of lung function	Evaluation requires long-term followup care.		
	Treatment-related adverse effects	Medication side effects can vary in intensity from none to very troublesome and worrisome. The level of intensity does not correlate to specific levels of control but should be considered in the overall assessment of risk.		
Recommended Action for Treatment (See "Stepwise Approach for Managing Asthma" for treatment steps.)		• Maintain current step. • Regular followups at every 1-6 months to maintain control. • Consider step down if well-controlled for at least 3 months.	• Step up 1 step. • Reevaluate in 2-6 weeks. • For side effects, consider alternative treatment options.	• Consider short course of oral systemic corticosteroids, step up 1-2 steps, and reevaluate in 2 weeks. • For side effects, consider alternative treatment options.

**ACQ values of 0.76–1.4 are indeterminate regarding well-controlled asthma.*

Key: ACQ, Asthma Control Questionnaire®; ACT, Asthma Control Tool™; ATAQ, Asthma Therapy Assessment Questionnaire®; EIB exercise-induced bronchospasm; EPR, Expert Panel Report; FEV_1, forced expiratory volume in 1 second; NAEPP, National Asthma Education and Prevention Program.

- The stepwise approach is meant to assist, not replace, the clinical decision-making required to meet individual patient needs.
- The level of control is based on the most severe impairment or risk category. Assess impairment domain by patient's recall of previous 2-4 weeks and by spirometry/or peak flow measures. Symptom assessment for longer periods should reflect a global assessment, such as inquiring whether the patient's asthma is better or worse since the last visit.

1 **National Heart, Lung, and Blood Institute. National Asthma Education Prevention Program. *Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma*. 2007:343-345.**

- At present, there are inadequate data to correspond frequencies of exacerbations with different levels of asthma control. In general, more frequent and intense exacerbations (eg, requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate poorer disease control. For treatment purposes, patients who had ≥2 exacerbations requiring oral systemic corticosteroids in the past year may be considered the same as patients who have not-well-controlled asthma, even in the absence of impairment levels consistent with not-well-controlled asthma.
- Validated Questionnaires for the impairment domain (these questionnaires do not assess lung function or the risk domain):

  ATAQ=Asthma Therapy Assessment Questionnaire®
  ACQ=Asthma Control Questionnaire®
  ACT=Asthma Control Test™

- Before step up in therapy:
  - Review adherence to medication, inhaler technique, environmental control, and comorbid conditions.
  - If an alternative treatment option was used in a step, discontinue and use the preferred treatment for that step.
  - According to the NAEPP 2020 Updates, individuals whose asthma is uncontrolled on maintenance ICS-LABA with SABA as quick-relief therapy should receive the preferred maintenance and reliever therapy in 1 inhaler consisting of low-dose ICS and formoterol (step 3) or medium-dose ICS and formoterol (step 4) given as 1 to 2 puffs once or twice daily as maintenance and 1 to 2 puffs as needed for symptoms. (Do not exceed 12 total puffs per day in patients age ≥12 years).

Key: ICS, inhaled corticosteroids; ICU, intensive care unit; LABA, long-acting beta$_2$-agonist; NAEPP, National Asthma Education and Prevention Program; SABA, short-acting beta$_2$-agonist.

Several asthma assessment tools have been validated since the EPR-3 2007 was published. A table of select tools is provided here. (For purposes of this document, only tools that include, in full or in part, the age range of ≥12 years are provided. Please see individual assessment tool for more details.)

Questionnaire
Asthma Control and Communication Instrument (ACCI)[1]
Asthma Impairment and Risk Questionnaire (AIRQ®)[2]
Asthma APGAR (APGAR)[3]
Composite Asthma Severity Index (CASI)[4]
Pediatric Asthma Control and Communication Instrument (PACCI)[5]
Pediatric Asthma Impairment and Risk Questionnaire (Peds-AIRQ®)[6]
RAND Asthma Control Measure (RAND-ACM)[7]
Royal College of Physicians 3 Questions (RCP 3 Questions)[8]

1. Patino CM, Okelo SO, Rand CS, et al. *J Allergy Clin Immunol*. 2008;122(5):936-943.e6.
2. Murphy KR, Chipps B, Beuther DA, et al. *J Allergy Clin Immunol Pract*. 2020;8(7):2263-2274.e5.
3. Rank MA, Bertram S, Wollan P, Yawn RA, Yawn BP. *Mayo Clin Proc*. 2014;89(7):917-925.
4. Wildfire JJ, Gergen PJ, Sorkness CA, et al. *J Allergy Clin Immunol*. 2012;129(3):694-701.
5. Okelo SO, Eakin MN, Patino CM, et al. *J Allergy Clin Immunol*. 2013;132(1):55-62.
6. Murphy KR, Chipps B, Lanz MJ, et al. *J Allergy Clin Immunol Pract*. 2025;13(10):2659-2671.
7. Lara M, Edelen MO, Eberhart NK, Stucky BD, Sherbourne CD. *Eur Respir J*. 2014;44(5):1243-1252.
8. Pinnock H, Burton C, Campbell S, et al. *Prim Care Respir J*. 2012;21(3):288-294.

3

Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention, 2026. Available from: www.ginasthma.org

Available from: www.ginasthma.org.

The Global Initiative for Asthma (GINA) is a network of individuals, organizations, and public health officials who disseminate information about the care of patients with asthma and provide a mechanism to translate scientific evidence into improved asthma care. The GINA Report was updated in 2026 following the routine twice-yearly cumulative review of the literature by the GINA Scientific Committee.

GINA assessment of asthma control at clinical visits in adults, adolescents and children 6-11 years

A. Recent asthma symptom control (but also ask the patient/caregiver about the whole period since last review*)

In the past 4 weeks, has the patient had:		Well controlled	Partly controlled	Uncontrolled
• Daytime asthma symptoms more than twice/week?	Yes☐ No☐	None of these	1–2 of these	3–4 of these
• Any night waking due to asthma?	Yes☐ No☐			
• SABA† reliever for symptoms more than twice/week?	Yes☐ No☐			
• Any activity limitation due to asthma?	Yes☐ No☐			

B. Risk factors for poor asthma outcomes

Assess risk factors at diagnosis and periodically, including after an exacerbation.

Measure FEV_1 at start of treatment, after 3–6 months of ICS-containing treatment to record the patient's personal best lung function, then periodically for ongoing risk assessment.

i. Risk factors for exacerbations

Uncontrolled asthma symptoms: Having uncontrolled symptoms is an important risk factor for exacerbations.[98]

Factors that increase the risk of exacerbations even if the patient has few asthma symptoms‡:[99-101]

- *SABA over-use:* High SABA use (≥3 x 200-dose canisters/year associated with increased risk of exacerbations, increased mortality particularly if ≥1 canister per month)[102-105]
- *Inadequate ICS*: Not prescribed, poor adherence,[106] or incorrect inhaler technique[107]
- *Other medical conditions:* Obesity,[100,101,108,109] chronic rhinosinusitis,[100,109] GERD,[109] confirmed food allergy,[110] pregnancy[111]
- *Exposures:* Smoking,[101,112] e-cigarettes,[113] allergen exposure if sensitized,[112,114] air pollution[115-118]
- *Psychosocial:* Major psychological or socioeconomic problems[119,120]
- *Lung function:* Low FEV_1 (especially <60% predicted),[112,121] high bronchodilator responsiveness[109,122,123]
- *Type 2 inflammatory markers:* Raised blood eosinophils,[100,109,124,125] high FeNO[100,126] (see Appendix, p.237)
- *Exacerbation history:* Ever intubated or in intensive care unit for asthma,[127] ≥1 severe exacerbation in last year[128,129]

ii. Risk factors for developing persistent airflow limitation

- *History:* Preterm birth, low birth weight and greater infant weight gain,[130] frequent productive cough[131,132]
- *Medications:* Lack of ICS treatment in patient with history of severe exacerbation[133]
- *Exposures:* Tobacco smoke,[131] noxious chemicals; occupational or domestic exposures[75]
- *Investigation findings:* Low initial FEV_1,[132] sputum or blood eosinophilia[132]

iii. Risk factors for medication side-effects

- *Systemic* Frequent OCS, long-term, high-dose and/or potent ICS, cytochrome P450 inhibitors§[134]
- *Local:* High-dose or potent ICS,[134,135] poor inhaler technique[136]

FeNO: fractional exhaled nitric oxide; FEV_1: forced expiratory volume in 1 second; GERD: gastro-esophageal reflux disease; ICS: inhaled corticosteroid; SABA: short-acting $beta_2$-agonist; OCS: oral corticosteroid. *In addition to assessing recent asthma symptom control, also ask the patient about symptom control over the whole period since their last clinical review. There are no validated tools for assessing long-term symptom control (>4 weeks); † Based on SABA (as-needed ICS-formoterol reliever not included); excludes reliever taken before exercise (see Assessing asthma symptom control, p.42); ‡ Independent risk factors after adjustment for the level of symptom control. Some studies have evaluated several of the above risk factors for exacerbations;[99-101]
§ Cytochrome P450 inhibitors such as ritonavir, ketoconazole, itraconazole may increase systemic exposure to some types of ICS and some long-acting $beta_2$-agonists; see drug interaction websites and p.131 for details. For children 6-11 years, also refer to Box 2-3, p.44. See Box 3-5, p.61 for specific risk reduction strategies.

For further information regarding references above, please visit ginasthma.org

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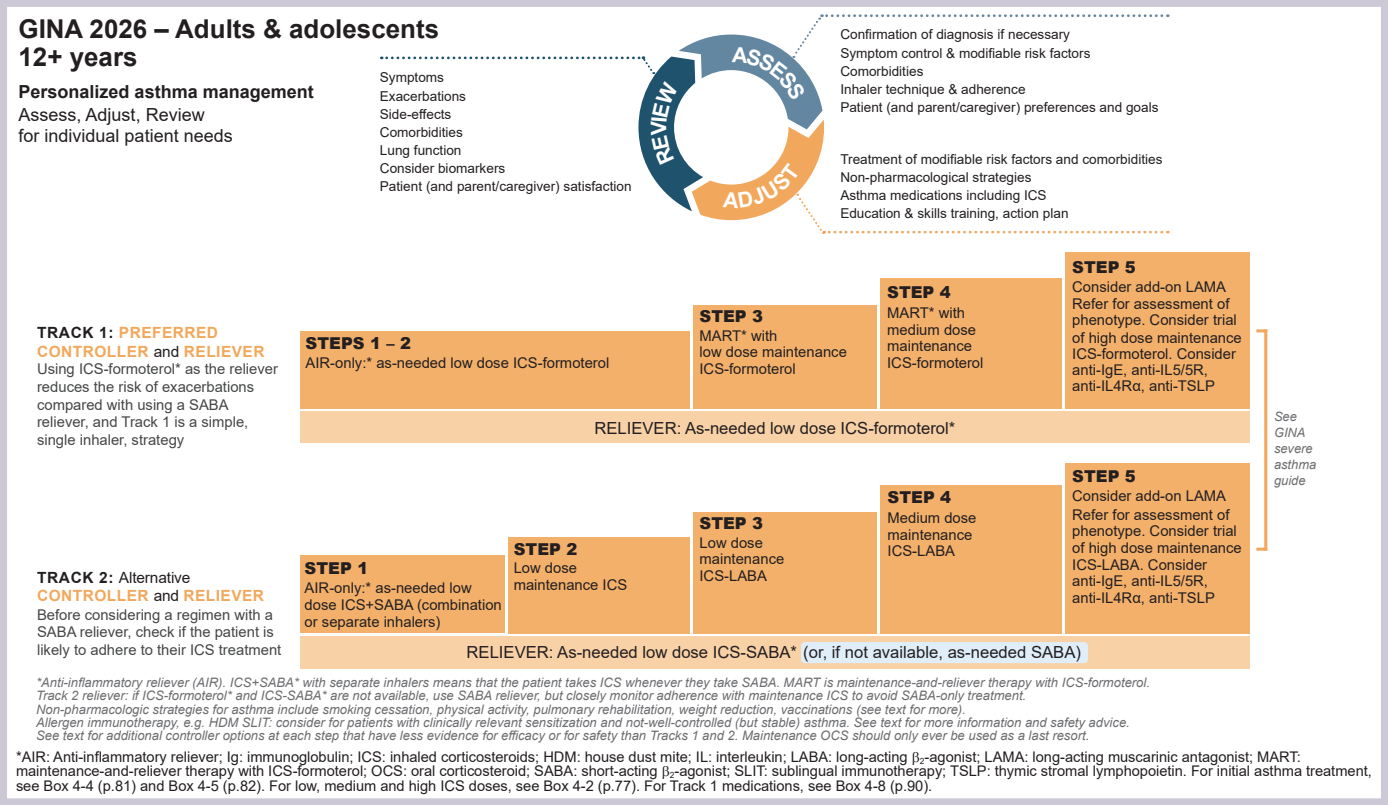
Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention, 2026.
Available from: www.ginasthma.org

STEPWISE APPROACH TO CONTROL SYMPTOMS AND MINIMIZE FUTURE RISK



The use of ICS-formoterol is not approved for maintenance and rescue therapy or for as-needed rescue only in the US. The recommendations for ICS-formoterol are based on clinical data evaluating the use of ICS-formoterol formulations and strengths not approved and not available in the US.

SELECT KEY POINTS FROM GINA 2026

- SABA-only treatment of asthma (without ICS) is not recommended by GINA for adults, adolescents, or children 6-11 years old.
  - Before considering a regimen with SABA reliever, GINA recommends to assess likely adherence with daily maintenance treatment
  - The risk of severe exacerbations and mortality increases incrementally with higher SABA use, independent of treatment step.
- As-needed low-dose ICS-SABA is listed as a reliever option across all steps of therapy in Track 2. This is referred to as anti-inflammatory reliever, or AIR.
- GINA recommends setting a SABA rescue/reliever frequency threshold (≤2 versus >2 days/week) in the assessment of symptom control. This assessment does not include the same criterion for the use of any anti-inflammatory rescue/reliever (AIR).
- ICS-formoterol should not be used as the reliever for patients taking a different maintenance ICS-LABA. The use of ICS-formoterol with other LABAs may be associated with increased adverse effects.

Key: GINA, Global Initiative for Asthma; LTRA, leukotriene receptor antagonist; SABA, short-acting beta$_2$-agonist; US, United States.

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Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention, 2026.
Available from: www.ginasthma.org

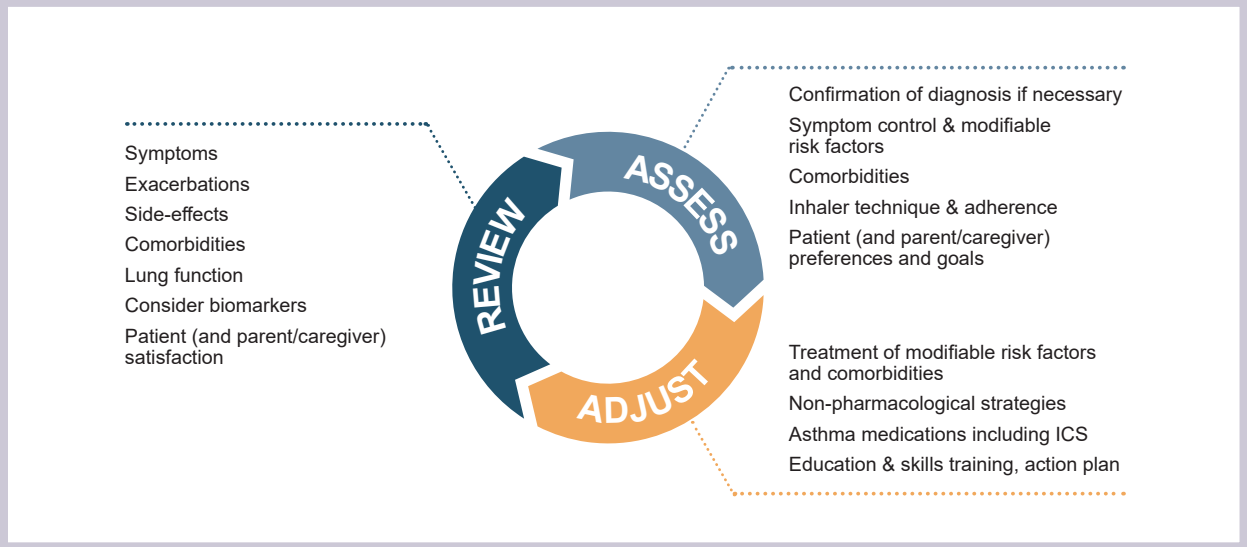
ASTHMA SEVERITY

Asthma severity can be assessed when the patient has been on controller treatment for several months:

- **Mild asthma** is asthma that is well-controlled with low-intensity treatment, ie, as-needed low-dose ICS-formoterol, or low-dose ICS plus as-needed SABA.
- **Moderate asthma** is asthma that is well-controlled with Step 3 or Step 4 treatment, eg, with low- or medium-dose ICS-LABA in either treatment track.
- **Severe asthma** is asthma that remains 'uncontrolled' despite optimized treatment with high-dose ICS-LABA, or that requires high-dose ICS-LABA to prevent it from becoming 'uncontrolled'. Severe asthma, ie, asthma that is relatively refractory to corticosteroid treatment must be distinguished from asthma that is difficult to treat due to inadequate or inappropriate treatment, or problems with adherence or comorbidities such as chronic rhinosinusitis or obesity, since correction of these comorbidities or risk factors ("treatable traits") can significantly improve asthma control. *See full report for more detail about the assessment of patients with difficult to treat or severe asthma.*

In control-based asthma management, pharmacological and non-pharmacological treatment is adjusted in a continuous cycle that involves assessment, treatment and review by appropriately trained personnel.

THE ASTHMA MANAGEMENT CYCLE FOR PERSONALIZED ASTHMA CARE



It is important to note that assessments and definitions of asthma control and severity, as well as asthma treatment management recommendations, may not always be consistent among various guidelines such as the NAEPP or GINA reports. Health care providers are encouraged to determine the best assessment and management strategies for their patients.

Key: GINA, Global Initiative for Asthma; ICS, inhaled corticosteroids; LABA, long-acting beta$_2$-agonist; NAEPP, National Asthma Education and Prevention Program; SABA, short-acting beta$_2$-agonist.